

CLAIMS

1. A method for video encoding a block comprising: combining a first prediction of a current block with a second prediction of a current block; wherein the
5 first prediction of the current block is intra prediction and the second prediction of the current block is inter prediction.
2. The method of claim 1, wherein encoding the block includes combining
10 the first prediction and the second prediction and a third prediction of the current block.
3. The method of claim 1, wherein the current block is coded as a Direct mode block.
- 15 4. The method of claim 1, further comprising reducing the filter strength of a deblocking filter adapted to increase the correlation between pixels adjacent to the current block.
5. The method of claim 1, wherein the second prediction is a null block
20 prediction.
6. The method of claim 1, wherein the first prediction and the second prediction are combined by averaging the first prediction and the second prediction.
- 25 7. The method of claim 1, wherein the first prediction and the second prediction are combined by weighting each of the first prediction and the second prediction.
8. The method of claim 1, wherein the current block is a 16 x 16
30 macroblock.
9. The method of claim 1, wherein the current block is a sub-macroblock.

10. The method of claim 1, wherein the current block is a 4 x 4 sub-macroblock partition.

5 11. A method of video encoding for compressing and encoding frames of a two-dimensional image sequence for transmission comprising: dividing a frame of the image sequence into blocks, selecting blocks and encoding the selected blocks in a bi-predictive hybrid intra-inter encoding mode into a bitstream for transmission.

10 12. The method of video encoding of claim 11 further comprising transmitting the bitstream containing the intra-inter encoded blocks.

13. A video encoder for encoding blocks within frames of a sequence of two dimensional images, the encoder comprising: an intra-frame prediction block being operatively connected to a combining unit and for outputting a first intra prediction of a block; and an inter-frame prediction block being operatively connected to the combining unit and for outputting a first inter prediction of the block; wherein the combining unit is adapted to combine the first intra prediction and the first inter prediction and to output a hybrid intra-inter coded block.

20 14. The video encoder of claim 13 wherein the combining unit is adapted to weight at least one of the first intra prediction of the block and the first inter prediction of the block prior to additively combining them.

25 15. The video encoder of claim 13 wherein the combining unit is adapted to average together the first intra prediction of the block and the first inter prediction of the block.

16. The video encoder of claim 13 wherein the hybrid intra-inter coded block is the average of the first intra prediction and the first inter prediction.

17. The video encoder of claim 13, wherein the intra-frame prediction block is adapted to output a second intra prediction of the block; and wherein the combining unit is further adapted to additively combine the first intra prediction and the second intra prediction.

18. The video encoder of claim 13, wherein the inter-frame prediction block is further adapted to output a second inter prediction of the block; and wherein the combining unit is further adapted to combine the first inter prediction and the second inter prediction.

19. A video encoder for compressing and encoding frames of a two dimensional image sequence for transmission, the video encoder being adapted to select blocks from at least one frame of the image sequence and to encode the selected blocks by combining a first prediction and a second prediction, wherein at least the first prediction is an intra prediction of the current block.

20. The video encoder of claim 19, wherein the second prediction is an inter prediction of the current block.

21. The video encoder of claim 19, wherein the second prediction is an intra prediction of the current block.

22. The video encoder of claim 19 wherein the encoder is further adapted to select for coding the current block, between an intra encoding mode of the related art, an inter encoding mode of the related art, and a hybrid intra-inter encoding mode.

23. The video encoder of claim 22 wherein coding the current block in the hybrid intra-inter encoding mode outputs the average of the intra prediction of the current block and an inter prediction of the current block.

24. The video encoder of claim 22 wherein coding the current block in the hybrid intra-inter encoding mode outputs a weighted additive combination of the intra prediction of the current block and an inter prediction of the current block.

5 25. A mobile telephone comprising a video encoder as claimed in claim 13.

26. A multimedia terminal, comprising a video encoder adapted to encode a digital video sequence using motion compensated prediction, said digital video sequence comprising a number of frames, wherein the video encoder is adapted to
10 select blocks from at least one frame of the image sequence and to encode the selected blocks; wherein encoding each of the blocks includes combining a first prediction and a second prediction, wherein at least the first prediction is an intra prediction of the current block.

15 27. A computer-usable medium having a computer-readable program code embodied therein for causing a computer system to perform the method of claim 1.

28. A recording medium that stores a program, readable by a computer, for causing a computer system to perform the method of claim 1.

20 29. A method for video encoding a block comprising: combining a first prediction type for a current block with a second prediction type for a current block; wherein the combination of the first prediction type and the second prediction type forms a hybrid prediction type.

25 30. The method of claim 29 wherein the step of combining is accomplished using a summing block.

30 31. The method of claim 29 wherein the step of combining the two prediction types is accomplished by performing a simple average of the two prediction types.

32. The method of claim 29 wherein the step of combining the two prediction types is accomplished by applying a weighted combination of the two prediction types.

5 33. A digital video data signal comprising predictive data combined from both intra and inter predictive data.